

1. A system for positioning a prosthetic element to achieve a desired orientation  
2 for cementation within an intramedullary canal of a bone, comprising:  
a prosthetic element having an articulating joint surface and an intramedullary stem;  
4 positioning apparatus including one or more fasteners that may be loosened and  
tightened to adjust the position of the prosthetic element relative to the bone; and  
6 a series of score marks on one or both of the prosthetic element and positioning  
apparatus to indicate the position of the prosthetic element to achieve a desired orientation.
2. The system of claim 1, wherein the articulating joint surface corresponds to a  
2 proximal femur.
3. The system of claim 1, wherein the shoulder articulating joint surface  
2 corresponds to a proximal humerus.
4. The system of claim 1, wherein the knee articulating joint surface corresponds  
2 to a distal femur
5. The system of claim 1, including one or more score marks that indicate the  
2 rotational orientation of the prosthesis.
6. The system of claim 1, including one or more score marks that indicate the  
2 proximal to distal orientation of the prosthesis.
7. The system of claim 1, including one or more score marks that indicate the  
2 lateral or transverse orientation of the prosthesis.
8. A system for positioning a prosthetic element to achieve a desired orientation

2 for cementation within an intramedullary canal of a bone having an outer cortex, the system  
comprising:

4 a prosthetic element having an articulating joint surface and an intramedullary stem;  
positioning apparatus for adjusting the orientation of the prosthetic element relative to  
6 the bone, the apparatus including:

a feature that encircles at least a portion of the bone,  
8 a structural element to engage the cortex of the bone so as to rigidly but  
removably couple the positioning apparatus to the bone, and  
10 one or more fasteners that may be loosened and tightened to adjust the  
position of the prosthetic element relative to the bone.

9. The system of claim 8, wherein the hip articulating joint surface corresponds  
2 to a proximal femur.

10. The system of claim 8, wherein the shoulder articulating joint surface  
2 corresponds to a proximal humerus.

11. The system of claim 8, wherein the knee articulating joint surface corresponds  
2 to the knee of a distal femur.

12. The system of claim 8, further including score marks on one or more of the  
2 prosthetic element and positioning apparatus to indicate the position of the prosthetic  
element to achieve desired orientation.

13. The system of claim 12, including one or more score marks that indicate the  
2 rotational orientation of the prosthesis.

14. The system of claim 12, including one or more score marks that indicate the  
2 proximal to distal orientation of the prosthesis.

15. The system of claim 12, including one or more score marks that indicate the  
2 lateral or transverse orientation of the prosthesis.

16. A system for achieving a desired orientation of a prosthetic element relative to  
2 a bone, comprising:

a prosthetic element having an articulating joint surface, an elongated member for  
4 introduction into an intramedullary canal, and one or more score marks to identify the  
relative position of the element;

6 instrumentation for rigidly and removably coupling the prosthetic element to the  
bone; and

8 instrumentation including one or more fasteners for adjusting the position of the  
element relative to the bone or the instrument.

17. The system of claim 16, wherein the hip articulating joint surface  
2 corresponds to a proximal femur.

18. The system of claim 16, wherein the shoulder articulating joint surface  
2 corresponds to a proximal humerus.

19. The system of claim 16, wherein the knee articulating joint surface  
2 corresponds to a distal femur.

20. A system for positioning a prosthetic element to achieve a desired orientation  
2 for cementation within an intramedullary canal of a bone, comprising:

- 4 a prosthetic element having an articulating joint surface, an intramedullary stem, and  
one or more score marks to assist in the positioning stem within an intramedullary canal of a  
bone; and
- 6 apparatus for cementing the prosthetic element within the intramedullary  
canal of the bone to achieve the desired orientation.

21. The system of claim 20, wherein the hip articulating joint surface corresponds  
2 to a proximal femur.

22. The system of claim 20, wherein the shoulder articulating joint surface  
2 corresponds to a humerus.

23. The system of claim 20, wherein the knee articulating joint surface  
2 corresponds to a distal femur.

24. The system of claim 20, including one or more score marks that indicate the  
2 rotational orientation of the prosthesis.

25. The system of claim 20, including one or more score marks that indicate the  
2 proximal to distal orientation of the prosthesis.

26. The system of claim 20, including one or more score marks that indicate the  
2 lateral or transverse orientation of the prosthesis.